

CLAIMS

We claim:

1. An absorbent article comprising:

an outer cover adapted to stretch upon application of a load by a first amount;

5 a liquid and gas permeable bodyside liner defining a bodyfacing surface and being generally superposed and coextensive with the outer cover, the bodyside liner being adapted to stretch upon application of the load by a second amount;

10 an absorbent body located between the bodyside liner and the outer cover and generally movable with the outer cover upon stretching of the outer cover; and

15 said first amount of stretch of the outer cover being greater than said second amount of stretch of the bodyside liner whereby a gap is formed between the bodyside liner and the absorbent body facilitating the flow of air and vapor through the bodyside liner in a loaded condition of the absorbent body.

2. An absorbent article as set forth in claim 1 wherein the bodyside liner is relatively more resilient when stretched than the outer cover.

3. An absorbent article as set forth in claim 2 wherein the bodyside liner comprises:

a sheet of liquid and gas permeable material; and

5 a suspension arranged to resiliently oppose stretching of the bodyside liner.

4. An absorbent article as set forth in claim 3 wherein the suspension is adapted to retract the bodyside liner subsequent to stretching of the bodyside liner.

5 5. An absorbent article as set forth in claim 3 wherein the suspension comprises at least one elastic cord located between the bodyside liner and the absorbent body, the elastic cord being stretched axially upon stretching of the bodyside liner.

6. An absorbent article as set forth in claim 5 wherein the suspension comprises multiple cords arranged in parallel, spaced apart relation to each other.

5 7. An absorbent article as set forth in claim 5 wherein the absorbent article comprises a garment worn to capture waste from the human body, the garment including an anterior region, a posterior region and a crotch region disposed longitudinally therebetween, said anterior region, posterior region and crotch region being integrally formed and configured when worn to define a central waist opening and a pair of leg openings, the crotch region extending generally laterally between said leg openings and wherein
10 the cord extends lengthwise generally parallel to line extending from the anterior region to the posterior region.

8. An absorbent article as set forth in claim 7 wherein the cord is attached to the bodyside liner by adhesive.

9. An absorbent article as set forth in claim 7 wherein the bodyside liner is free of fixed connection to the outer cover and absorbent body at least in the crotch region.

10. An absorbent article as set forth in claim 5 wherein the cord is made of a material selected from a group including a styrene-butadiene elastomer and a spandex fiber in the form of continuous microfilaments.

11. An absorbent article as set forth in claim 1 wherein the bodyside liner is adapted to stretch in a range from about 30% to about 200% of its original length.

12. An absorbent article as set forth in claim 11 wherein the bodyside liner is adapted to stretch in a range from about 50% to about 150% of its original length.

13. An absorbent article as set forth in claim 12 wherein the bodyside liner is adapted to stretch in a range from about 80% to about 120% of its original length.

14. An absorbent article as set forth in claim 1 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load of at least about 30 g/in.

15. An absorbent article as set forth in claim 14 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load of at least about 50 g/in.

16. An absorbent article as set forth in claim 15 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load of at least about 60 g/in.

17. An absorbent article as set forth in claim 16 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load less than about 150 g/in.

18. An absorbent article as set forth in claim 1 wherein the bodyside liner has a retraction force at 50% of its maximum extension of at least about 9 g/in.

19. An absorbent article as set forth in claim 18 wherein the bodyside liner has an retraction force at 50% of its maximum extension of at least about 15 g/in.

20. An absorbent article as set forth in claim 19 wherein the bodyside liner has an retraction force at 50% of its maximum extension of at least about 18 g/in.

21. An absorbent article as set forth in claim 20 wherein the bodyside liner has an retraction force at 50% of its maximum extension of less than about 120 g/in.

22. An absorbent article as set forth in claim 1 wherein the article is free of material on the side of the bodyside liner opposite the absorbent body and between the bodyside liner and the absorbent body.

23. An absorbent garment for capturing human waste when worn, the garment comprising:

a liquid impermeable outer cover adapted to stretch upon application of a load by a first amount;

5 a liquid and gas permeable bodyside liner generally superposed and coextensive with the outer cover, the bodyside liner being adapted to stretch upon application of the load by a second amount, the bodyside liner comprising a sheet of liquid and gas permeable material defining a
10 bodyfacing surface, and plural cords of resilient elastic material on a side of the sheet opposite the bodyfacing surface, the cords applying a resilient force in opposition to stretching of the sheet;

15 an absorbent body located between the bodyside liner and the outer cover and generally movable with the outer cover upon stretching of the outer cover; and

said first amount of stretch of the outer cover being greater than said second amount of stretch of the bodyside liner whereby a gap is formed between the bodyside liner and

20 the absorbent body facilitating the flow of air and vapor
through the bodyside liner in a loaded condition of the
absorbent body.

24. An absorbent garment as set forth in claim 23
wherein the absorbent garment includes an anterior region, a
posterior region and a crotch region disposed longitudinally
therebetween, said anterior region, posterior region and
5 crotch region being integrally formed and configured when
worn to define a central waist opening and a pair of leg
openings, the crotch region extending generally laterally
between said leg openings and wherein the cords extend
lengthwise generally parallel to line extending from the
10 anterior region to the posterior region.

25. An absorbent garment as set forth in claim 24
wherein the cords are attached to the bodyside liner by
adhesive.

26. An absorbent garment as set forth in claim 24
wherein the bodyside liner is free of fixed connection to
the outer cover and absorbent body at least in the crotch
region.

27. An absorbent garment as set forth in claim 23
wherein the cord is made of a material selected from a group
including a styrene-butadiene elastomer and a spandex fiber
in the form of continuous microfilaments.

28. An absorbent garment as set forth in claim 23
wherein the bodyside liner is adapted to stretch in a range
from about 30% to about 200% of its original length.

29. An absorbent garment as set forth in claim 28
wherein the bodyside liner is adapted to stretch in a range
from about 50% to about 150% of its original length.

30. An absorbent garment as set forth in claim 29 wherein the bodyside liner is adapted to stretch in a range from about 80% to about 120% of its original length.

31. An absorbent garment as set forth in claim 23 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load of at least about 30 g/in.

32. An absorbent garment as set forth in claim 31 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load of at least about 50 g/in.

33. An absorbent garment as set forth in claim 32 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load of at least about 60 g/in.

34. An absorbent garment as set forth in claim 33 wherein the bodyside liner will further stretch at 50% of its maximum extension upon application of a load less than about 150 g/in.

35. An absorbent garment as set forth in claim 23 wherein the bodyside liner has a retraction force at 50% of its maximum extension of at least about 9 g/in.

36. An absorbent garment as set forth in claim 35 wherein the bodyside liner has an retraction force at 50% of its maximum extension of at least about 15 g/in.

37. An absorbent garment as set forth in claim 36 wherein the bodyside liner has an retraction force at 50% of its maximum extension of at least about 18 g/in.

38. An absorbent garment as set forth in claim 37 wherein the bodyside liner has an retraction force at 50% of its maximum extension of less than about 120 g/in.

39. An absorbent garment as set forth in claim 23 wherein the garment is free of material on the side of the bodyside liner opposite the absorbent body and between the bodyside liner and the absorbent body.